

Quiz Fri

Ch 11 Area

11.1

11.2

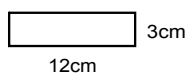
11.3 (1/2)

11.1 Area of Parallelograms

11.2 Area of Triangles, Trapezoids,
and RhombiArea of a rectangle = bh Area of a square = s^2 Area of a parallelogram = bh 

Base and height are perpendicular

Example 1

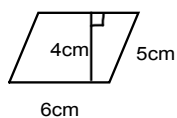


$$A = bh$$

$$12 \cdot 3$$

$$A = 36 \text{ cm}^2$$

Example 2

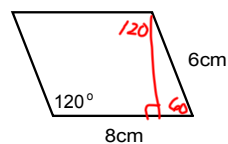


$$A = bh$$

$$6 \cdot 4$$

$$24 \text{ cm}^2$$

Example 3



$$A = 8 \cdot 3\sqrt{3}$$

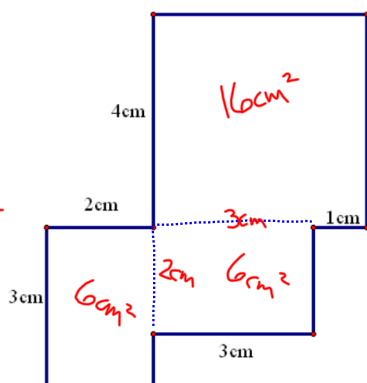
$$24\sqrt{3} \text{ cm}^2$$

30	60	90
x	x\sqrt{3}	2x
3	3\sqrt{3}	6
	h	

Example 4

Assume all segments that appear perpendicular are.

$$A = 28 \text{ cm}^2$$



Example 5

A (-2, 3)

B (4, 1)

C (3, -2)

D (-3, 0)

What shape is it?

Find the area.



$$AB = \sqrt{40}$$

$$BC = \sqrt{10}$$

$$A = \sqrt{400} = 20 \text{ units}^2$$



$$A = \frac{1}{2}bh$$

What is the area of this shape?
Cut it in half.

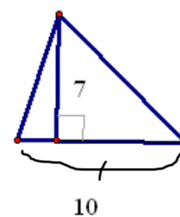
Area of a Triangle =

$$\frac{1}{2}bh$$

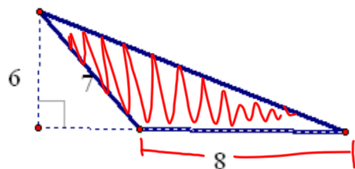
Example 1

$$A = \frac{1}{2} 10 \cdot 7$$

$$= 35 \text{ u}^2$$



Exam 1



$$A = \frac{1}{2} 8 \cdot 6$$

$$= 24 \text{ u}^2$$

Example 3

What is the length of AB? =

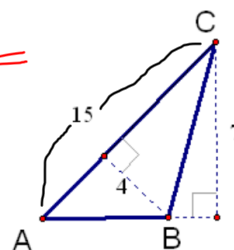
$$A = \frac{1}{2} 4 \cdot 15$$

$$A = 30 \text{ u}^2$$

$$A = \frac{1}{2} 7 \cdot AB$$

$$30 = \frac{1}{2} 7 \cdot AB$$

$$8.6 = \text{units } AB$$



* Find Area * then
use it to find AB.

Example 4

Isosceles

Use pyth. thm
to find h.

$$6^2 = 2^2 + h^2$$

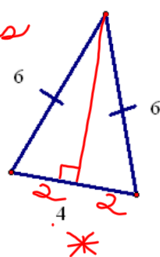
$$36 = 4 + h^2$$

$$32 = h^2$$

$$4\sqrt{2} = h$$

$$A = \frac{1}{2} 4 \cdot 4\sqrt{2}$$

$$A = 8\sqrt{2} \text{ units}^2$$



Example 5

$$A = \frac{1}{2} 8 \cdot 4\sqrt{3}$$

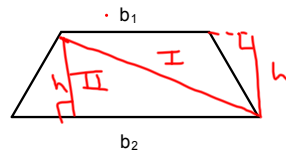
$$= 16\sqrt{3} \text{ u}^2$$



$$\text{Area of an Equilateral Triangle} = \frac{s^2\sqrt{3}}{4}$$

$$A = \frac{8^2\sqrt{3}}{4}$$

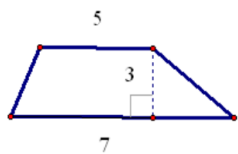
$$A = 16\sqrt{3}$$



$$A_{\text{TRAP}} = A_I + A_{II}$$

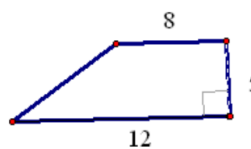
$$= \frac{1}{2}b_1h + \frac{1}{2}b_2h$$

$$A = \frac{1}{2}h(b_1 + b_2)$$



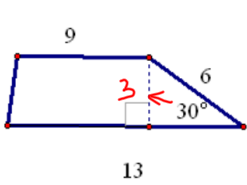
$$A = \frac{1}{2}3(5+7)$$

$$A = 18u^2$$



$$A = \frac{1}{2}5(8+12)$$

$$= 50u^2$$



$$\begin{array}{r|l} 30 & 60 & 90 \\ \hline 3 & & 6 \end{array}$$

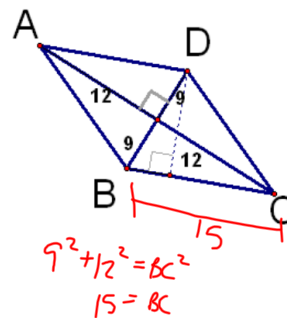
$$A = \frac{1}{2} 3(9+13) \\ = 33 \text{ u}^2$$

R(4, 2)
S(6, -1)
T(-2, -1)
U(-1, 2)



$$\begin{array}{ll} UR = 5 & h = 3 \\ TS = 8 & A = \frac{1}{2} 3(5+8) \\ & A = 19.5 \text{ u}^2 \end{array}$$

Area of a Rhombus = $\frac{1}{2} d_1 \cdot d_2$



What is the area of the rhombus?

$$A = \frac{1}{2} d_1 \cdot d_2 \\ \frac{1}{2} 24 \cdot 18 = 216 \text{ u}^2$$

What is the height of the rhombus?

$$\begin{array}{l} * A = bh \\ 216 = 15 \cdot h \\ 14.4 = h \end{array}$$



HW

p598 9-19odd

p606 13-21, 25, 27, 30, 32